

CLAIMS

1. An ink drying system for a printer, comprising:
an IR heating element;
a guide, to concentrate heat energy from the IR heating element on print
5 media; and
a controller procedure to control operation of the IR heating element.

2. The system of claim 1, additionally comprising:
sensors, in communication with the controller procedure, to measure
10 relative humidity and temperature.

3. The system of claim 1, wherein the controller procedure
additionally considers print data as a constraint to control operation of the IR
heating element.
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4. The system of claim 1, wherein the controller procedure causes
the IR heating element to put out more heat in locations on the print media
where print data indicate extensive use of ink than in locations where the print
data indicate moderate use of ink.
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5. The system of claim 1, wherein the IR heating element is located
on a print carriage.

6. The system of claim 1, wherein IR heating elements are located
25 on both sides of a printhead carried by a print carriage.

7. The system of claim 1, wherein the guide comprises:
a light pipe, carried by a carriage and configured to direct IR energy toward print media adjacent to a printhead carried by the carriage, wherein the light pipe comprises: a collector; a pipe, in communication with the collector;
5 and an emitter, in communication with the pipe.

8. The system of claim 1, wherein the guide comprises:
a reflector to direct IR energy to print media adjacent to a printhead.

10 9. The system of claim 1, wherein the guide comprises:
a collimator to direct IR energy in a substantially straight line, substantially parallel to a carriage rod upon which a printhead travels; and
a light pipe, movable along a carriage supporting the printhead, to receive IR energy from the collimator and to deliver IR energy to print media
15 adjacent to the printhead.

10. The system of claim 1, additionally comprising:
wherein first and second guides are configured for operation in first and second directions of printhead movement.

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11. The system of claim 1, wherein the guide comprises:
a page wide array of IR heating elements and guides; and
wherein the page wide array is located in a forward position, configured to warm print media prior to application of ink.

12. The system of claim 1, wherein the guide comprises:
a page wide array of IR heating elements and guides; and
wherein the page wide array is located in a rearward position,
configured to warm print media after application of ink.

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13. A processor-readable medium comprising processor-executable
instructions for operating a printer, the processor-executable instructions
comprising instructions for:

moving a printhead relative to print media; and

10 operating an IR lamp to direct IR energy according to a guide, wherein
the guide is configured for directing the IR energy toward the print media.

14. A processor-readable medium as recited in claim 13, wherein
operating the IR lamp comprises:

15 evaluating print data to determine timing and level of IR energy needed
to dry the print media.

15. A processor-readable medium as recited in claim 13, comprising
further instructions for:

20 moving a second printhead over an area of the print media already
printed by the printhead and heated by the IR lamp.

16. A processor-readable medium as recited in claim 13, wherein
directing the IR energy toward the print media comprises:

25 generating IR directed toward a collector portion of a light pipe for
movement out an emitter portion of the light pipe and contact with a desired
location on the print media.

17. A processor-readable medium as recited in claim 13, wherein operating the IR lamp releases IR energy is tuned to emphasize wave lengths selected for absorption by water.

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18. A processor-readable medium as recited in claim 13, wherein operating the IR lamp additionally comprises evaluating ambient temperature and humidity to determine timing and level of IR energy needed to dry the print media.

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19. A processor-readable medium as recited in claim 13, wherein moving the printhead relative to the print media comprises moving a carriage carrying a printhead on a carriage rod, and wherein operating the IR lamp causes IR energy to be sent through a compound guide, comprising a collimating portion adjacent to the IR lamp and a light pipe carried by the printhead.

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20. A print system, comprising:

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means for generating IR energy comprising frequencies calculated for absorption by water;

means for directing the IR energy through operation of a guide for concentration on print media; and

means for using ambient temperature and humidity to assist in controlling operation of the means for generating IR energy.

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21. The print system of claim 20, wherein the means for directing comprises a light pipe having a collector in communication with the means for generating IR energy and an emitter to concentrate the IR energy on a desired location on the media.

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22. The print system of claim 20, additionally comprising:
means for using print data to assist in controlling operation of the means for generating IR energy.

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23. The print system of claim 20, additionally comprising:
means for using print data to cause more IR energy to be used in response to more printed pixels and less IR energy to be used in response to less printed pixels.

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24. The print system of claim 20, additionally comprising:
means for using print data to turn on and off the means for generating IR energy in response to operation and non-operation of a printhead.

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25. The print system of claim 20, additionally comprising:
means for providing proportional amounts of ink and IR energy, in view of an ambient temperature and humidity, on locations of the print media.

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26. The print system of claim 20, wherein the guide comprises:
means for collimating the IR energy; and
means for receiving the collimated IR energy with a light pipe carried by a printhead, and for directing the IR energy to contact print media.

27. The print system of claim 20, wherein the guide comprises:
means for reflecting IR energy to contact print media.

28. The print system of claim 20, wherein the guide comprises:
5 means for piping IR energy through an IR fiber optic material to heat a
location on print media; and
means for timing the heating of the location on the print media to
coordinate with application of ink to the location on the print media.

10 29. A method of drying ink, comprising:
controlling operation of an IR lamp to generate IR energy, wherein the
IR energy is of a wave length calculated for absorption by water, and wherein
the IR energy is generated in response to anticipation of ink on print media;
reflecting the IR energy into a guide; and
15 directing the IR energy to the print media through the guide.

30. The method of claim 29, wherein the anticipation is based on
reviewing print data.

20 31. The method of claim 29, wherein controlling operation of the IR
lamp to generate a level of IR energy comprises:
measuring ambient temperature and humidity; and
generating the level of IR energy proportional to the ambient
temperature and humidity.

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32. The method of claim 29, wherein directing the IR energy to print media through the guide comprises guiding the IR energy is through collector, pipe and emitter portions of the guide.

5 33. The method of claim 29, directing the IR energy to print media through the guide comprises:

directing the reflected IR energy through a collimating device;
receiving collimated IR energy in a light pipe; and
directing the IR energy to print media using the light pipe.

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34. A processor-readable medium comprising processor-executable instructions for operating a printer, the processor-executable instructions comprising instructions for:

operating an IR lamp to generate a quantity of IR energy;
15 selecting the quantity of the IR energy generated to be proportional to ink to be used, as indicated by print data; and
using ambient temperature and humidity to assist in controlling operation of the IR lamp.

20 35. The processor-readable medium of claim 34, wherein selecting the quantity of the IR energy generated comprises instructions for:

increasing the quantity of IR energy where ink density is higher and decreasing the quantity of IR energy where ink density is lower, as indicated by the print data.

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36. The processor-readable medium of claim 34, wherein selecting the quantity of the IR energy generated comprises instructions for:

turning on and off the IR lamp in response to operation and non-operation of a printhead.

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37. The processor-readable medium of claim 34, wherein selecting the quantity of the IR energy generated comprises instructions for:

selecting the level of IR energy based on measured ambient temperature and humidity.

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